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A GEOLOGICAL AND GEOCHEMICAL REPORT

ON

THE BURN CLAIM GROUP

10 MILES EAST - NORTH EAST OF AIKEN LAKE

OMINECA MINING DIVISION

BRITISH COLUMBIA

MINERAL CLAIM MAP 94 C/ 5 E AND 6 W

Latitude : 56° 27' N

Longitude : 125° 28' W

FOR

SEREM LTD.

BY

P. SONNENDRUCKER, P. ENG.
GEOLOGICAL ENGINEER

Field Work: June 6 - June 26, 1973

Report: August 1973

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ILLUSTRATIONS

1. INTRODUCTION

A reconnaissance exploration program for lead and zinc by geochemical stream sampling was carried out by SEREM LTD. in the Omineca Mountains during the 1972 field season (Operation Ingenika 1972).

Several geochemical silt anomalies were detected and lead-zinc showings in carbonate rocks were examined.

Ten mineral claims, called BURN # 1 - 10 M. C. , were located on a showing occuring in a limestone crag at 10 miles E - NE of AIKEN LAKE. Barite lenses outcropping in a black shale and grey dolomite environment, 3,000' SE of the Pb-Zn showing, were covered by the same group of claims.

During a follow-up exploration traverse, another Pb-Zn showing was found on the North slope of a knob, 8,000' NW from the original showing. The hill was covered by the ten additional BURN # 11 - 20 Mineral Claims.

From June 6th to June 26th, 1973, a surface exploration program was carried out from a base camp set up just below the main showing, with line cutting, geochemical soil sampling, trenching and geological mapping.

This report describes the work done on BURN GROUP,

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discusses the results and presents conclusions and recommendations. The survey data are presented on a geological map and a geochemical map for lead and for zinc, at scale 1" = 400'.

2. PROPERTY AND OWNERSHIP

The BURN # 1 - 10 Mineral Claims were located for SEREM LTD. on August 3rd, 1972 and recorded at Smithers Mining Recorder, Omineca Mining Division, on August 9th, 1972 under Records No. 114,351 - 114,360, inclusive.

The BURN #11 - 20 Mineral Claims were located on September 7th, 1972, and recorded at Smithers on September 14, 1972 under Records No. 116,061 - 116,070, inclusive.

Notice to group the 20 Mineral Claims into the so-called BURN GROUP was filed on August 21, 1973 together with application for certificates of work.

The BURN GROUP is owned by SEREM LTD., 914 - 850 West Hastings Street, VANCOUVER 1, B. C.

3. LOCATION AND ACCESS

The BURN GROUP is located at 10 miles East-North East of AIKEN LAKE, eastward from LAY RANGE, Aiken Lake Map Sheet 94 - C. The property overlaps

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Mineral Claim Maps 94 C - 5 E and 94 C - 6 W at latitude 56° 27' N and longitude 125° 28' W, in the Omineca Mining Division.

Access to the property is by helicopter from AIKEN LAKE. From a base camp set up just below the main showing, line cutting, geochemical soil sampling, trenching and geological mapping were carried out in June 1973.

4. PHYSIOGRAPHY

The BURN GROUP is located in an area of rolling hills and lowlands. Elevations range from 4,500' to 5,200'. The whole area is forested, except for the upper part of the knob in the northern portion of the Claim Group, which is devoid of trees and covered by juniper brush. The summit is around 5,200'.

Drainage is from South-West to North-East with creeks running to the SWANNELL RIVER.

Glacial cover is extensive in the lowlands and rock exposures are sparce, except along some "Canyons" and on the "Hill".

5. GEOLOGY

a) Regional

In this part of the Omineca Mountains, lead-zinc mineralization occurs in lenticular carbonate formations of the Ingenika Group, which is underlain by metamorphic

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formations of the TENAKIHI GROUP. Exact geological relationships between these two groups are not exactly defined. Conformity or light unconformity is admitted. The biotite metamorphic isograd is taken as the top of the TENAKIHI GROUP.

The age of the TENAKIHI GROUP and part of the INGENIKA GROUP is late Proterozoic.

b) Local

The Claim Group is underlain by an assemblage of clastic and carbonate material of the INGENIKA GROUP, Units 2 and 4, Aiken Lake Map Sheet, GSC 1030A.

A section of this assemblage is supplied by sparce rock exposures following "Showing Creek" upstream. The stratigraphic succession seems to be:

1. - coarse clastic grit with conglomeratic lenses.
2. - green fine grained quartzose chloritoschist with barren quartz lenses.
3. - green soft chloritoschist.
4. - massive white limestone with irregular bands of grey patches near the bottom.
5. - grey fine grained bedded dolomite.
6. - missing (fault?)
7. - siliceous black slates with graphitic partings and a few pyritiferous zones.

These units are striking Northwest with variable, but general dip to the Southeast.

From the east base of the "Knoll" to the top, the

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succession is:

3. - green chloritoschist

4. - massive white limestone

5. - grey fine grained dolomite

6. - siliceous dolomite passing to a relatively pure white quartzite on the top of the knoll.

The black slate unit is sparcely located downhill in the northern corner of the claim group.

Tan dolomitic zones occur in the white limestones close to the grey bedded dolomite. Careful mapping on the Crag showings indicates these zones striking East probably following a set of fractures or joints into the white limestone. Sometimes, dolomitic zones are breccia-like with grey dolomitic fragments in a coarse dolomitic or calcitic cement.

Mineralization is enclosed in these dolomitic zones. No mineralization was found in the siliceous dolomitic unit on the top of the "Knoll".

Tectonic structure is not very well defined. Faults are interpreted from linear alignments along creeks or gulleys.

c) Mineralization

On the "Crag showing", two mineralized outcrops were known at the beginning of the survey. Trenches in overburden exposed mineralization in bed rock.

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Narrow seams of sparce fine black looking galena occur in a 3' wide dolomitic zone, which cross-cut massive white limestone.

A hand specimen from this showing assayed:
Pb: 5.00% - Zn: 2.80% - Ag: 5.50 oz./t - Ba: 0.48%

A 5' by 5' channel sample along the #2 Trench was deceptive (see BONDAR-CLEGG, Report A23-269).

On the "Knoll", float of mineralized dolomite was found down-slope from the gossan area on the north side of the hill and along the south-east slope.

A hand specimen from float assayed:
Pb: 3.64% - Zn: 0.10% - Ag: 0.58 oz./t - Ba: 1.4%

A metallographic study of polished sections was made:

Xenomorphic galena in an automorphic dolomitic gangue. Veinlets with cerussite filling cross-cutting galena and dolomite. Frequent subautomorphic pyrite enclosed in galena or dolomite. Goethite in very fine veinlets. Traces of light sphalerite.

6. GEOCHEMICAL SURVEY

a) Survey method

A 52,000' long base line was established with cross-lines on 400' intervals. Stations were marked at 100' intervals along base line and cross-lines.

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All surveying was carried out by Silva Ranger Compass and Topofil. The survey was often laborious, because of snow cover and steep slopes.

111,300' of lines were chained and picketed.

b) Sampling method

608 soil samples were collected at 200' intervals.

Soil samples were taken under the organic cover. Extensive glacial cover was encountered on almost all claims, except on the Crag showing and on the Knoll, where loose float is frequent.

c) Assay method

Assays were run for Pb and Zn by Vancouver Geochemical Laboratories (Assay reports #73 - 79 - 005 - 007 - 015 and 016).

Samples were dried in a hot air drier, then ground to - 80 mesh. 0,50 g. portions of the - 80 mesh fraction were weighed with a torsion balance,

Extraction was by hot $HClO_4$ and HNO_3 digestion and detection by using a Techtron A. A. 5 (Atomic Absorption Spectrophotometer).

d) Results and Interpretation

For the 608 soil values at 200' intervals:

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Range of values: Pb: 2(!) - 2320 ppm.
Zn: 17 - 8000 ppm.

Because of the unhomogeneity of the soil cover (glacial till, swampy muds, etc..), it is dubious that any statistical quantitative geochemical study would be useful. However, a broad separation of geochemical values into highs and lows gave a useful tool in locating anomalous areas.

The Crag showing area is well defined by the Pb-500 ppm and Zn-1000 ppm isovalues lines. This same high-low classification also indicates anomalous areas on the Knoll.

In the southern part of the claim group, Zn-anomalies are spotty and without any correlation with Pb.

In the northern part of the claim group, a 2,400' long Pb and Zn anomalous zone appears on M.C. # 18 and 20. Another anomalous zone is on M.C. #14 and on checking the ground up-slope mineralized float was found.

The source of these anomalous areas have only been recognized in the "Crag" zone.

7. CONCLUSIONS AND RECOMMENDATIONS

The geological mapping indicates a stratabound characteristic to the mineralization.

The geochemical survey outlines a 2,400' long anomalous zone for Pb and Zn on the southern slope of the "Knoll".

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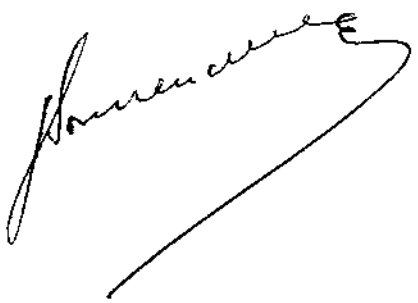
I have recommended to SEREM LTD. a careful geological mapping of this area, with a follow - up work by trenching and possibly a short hole drilling program.



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ANNEXE I

STATEMENT OF EXPENSES

The following is a breakdown of expenses incurred in carrying out the work on the BURN GROUP from June 6 to June 26, 1973.

Physical Survey

Trenching: 82 cubic yards

Cobra drill renting	8 days	$ 63.56
Explosives		$ 85.00
Assaying (BONDAR CLEGG) 11 rock samples		$225.50
Salary: P. LANFRANCO, Powderman	8 days	$200.00
		$574.06

Geological Survey

Salaries:	P. SONNENDRUCKER Geological Engineer	15 days	$ 808.03
	P. TEGART Geologist	2 days	$ 63.34
	P. BOILEAU Geologist	17 days	$ 481.61
	C. CARON Junior Geologist	14 days	$ 280.00
			$1632.98

Geochemical Survey

Line cutting: 111,200'

Soil Sampling: 608 samples

Salaries:	J. THOMAS Line cutter and sampler	12 days	$ 360.00
	H. ABRAHAM Line cutter and sampler	4 days	$ 120.00
	P. MURDOCK Line cutter and sampler	16 days	$ 480.00

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STATEMENT OF EXPENSES (Continued)

Assaying (VANGEOCHEM LAB)		$ 881.60
		$1841.60
D. GRIFFIN Cook	21 days	$ 279.93
Food Expenses ($6.00/man/day)		$ 786.00
Helicopter expenses (not included in this statement).		
TOTAL		$5,114.57

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ANNEXE II

STATEMENT OF QUALIFICATIONS

I, PIERRE F. SONNENDRUCKER, with business address in VANCOUVER, B. C., hereby certify that:

1. I am a registered Professional Engineer in the Province of British Columbia.

2. I am a graduate of the university of NANCY, FRANCE, with the diploma of Geological Engineer of the "Ecole Nationale Superieure de Geologie Appliquee et de Prospection Miniere" (Ingenieur Geologue ENSG, promotion 1954).

3. I have practised as a Geologist since 1957 in West Africa (Ivory Coast, Guinea), France and Canada, (British Columbia).

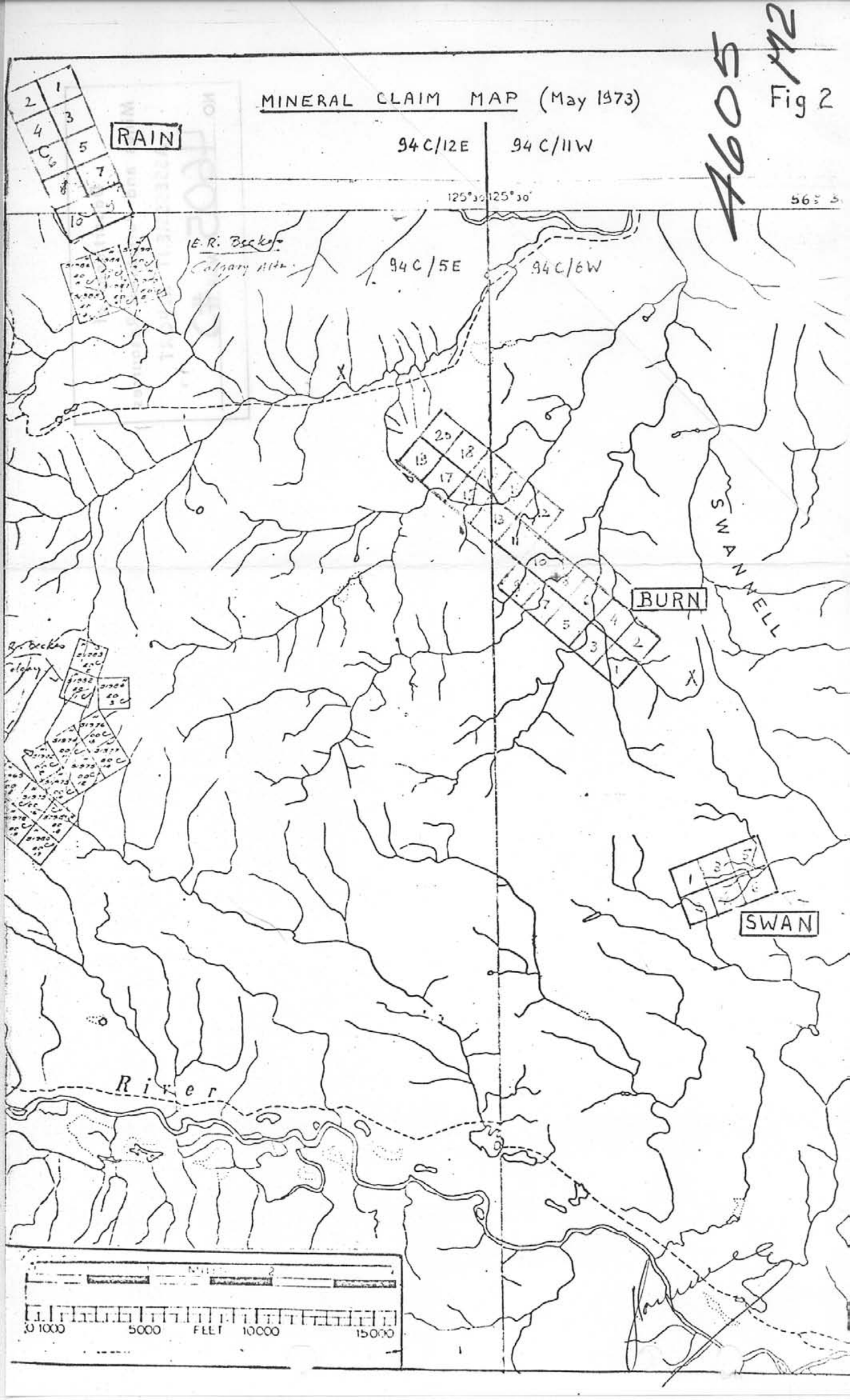
4. I am employed by SEREM LTD, 770 - 2100 Drummond Street,MONTREAL 107, Quebec, as a Senior Geologist. My residential address is 2021 West 59th Avenue, Vancouver 14, B. C. and my office is located at 914 - 850 West Hastings Street, VANCOUVER 1, B. C.

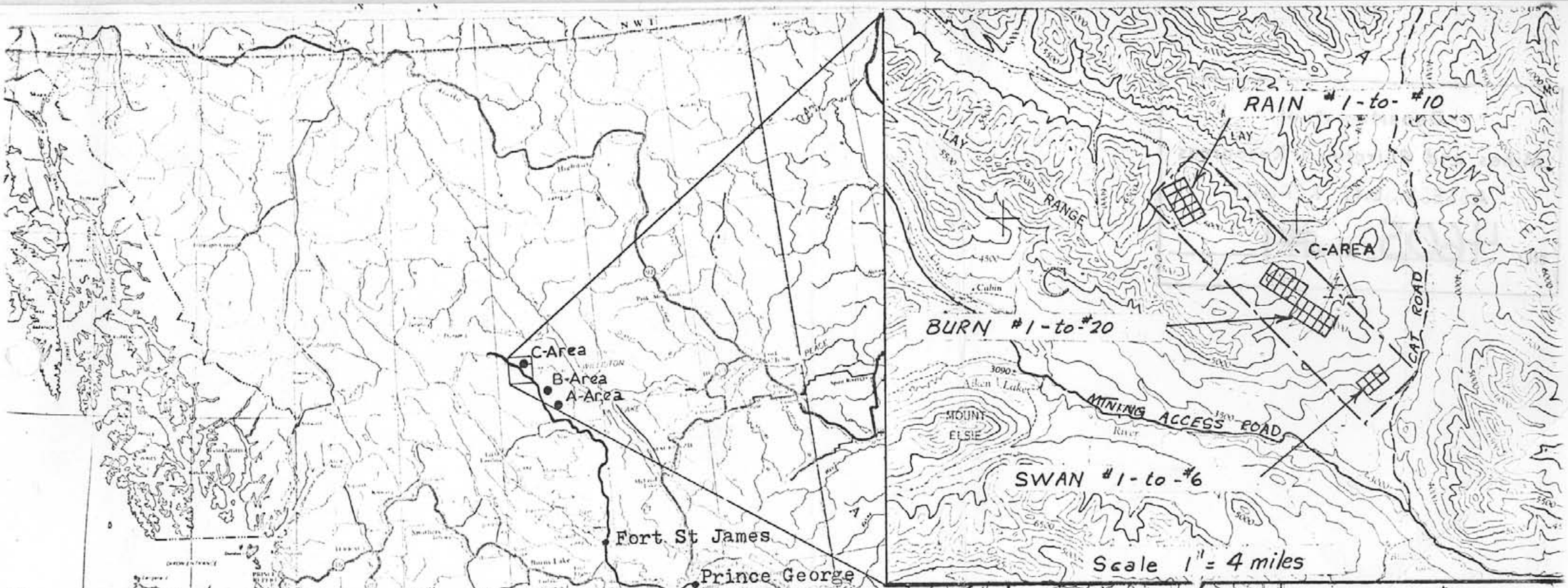
5. I have personally participated in the field work and supervised all the completed work included in this report. I have interpreted the data resulting from this work.

Respectfully submitted,

PIERRE F. SONNENDRUCKER

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
P. F. Sonnendrucker


MINERAL CLAIM MAP (May 1973)
Fig 2
4605
94 C/12E
94 C/11W
94 C/5E
94 C/6W
125°30'
RAIN
BURN
SWAN
SWANNELL
River
E. R. Backs
Calgary Alta.
FEET
5000
10000
15000



BRITISH COLUMBIA

Operation Ingenika

Index Map

Location of
A, B and C-Areas.

Detail Map

Location of
Rain, Burn and Swan
claim groups.

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Fig 1

M1

To: Serem Ltd.

PAGE No. 1

REPORT No A23 - 269

DATE: June 25, 1973

P. O. Box 1268
Fort St. James, B. C.

BONDAR-CLEGG & COMPANY LTD.

CERTIFICATE OF ASSAY

Samples submitted: June 18, 1973
Results completed: June 25, 1973

We certify that the following are the results of assays made by us upon the herein described ore samples.

MARKED	GOLD		SILVER	Pb	Zn	Ba					TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
Burn Trench # 2											
0 - 5			trace	0.02	L 0.02	0.10					
5 - 10			0.06	0.19	0.40	L0.10					
10 - 15			0.27	0.28	1.82	0.25					
15 - 20			0.11	0.11	1.55	0.10					
20 - 25			0.67	0.38	0.68	0.18					
25 - 30			0.63	0.07	0.20	0.10					
30 - 35			0.02	0.04	0.50	3.47					
35 - 40			0.07	0.14	0.59	0.15					
40 - 45			0.03	0.06	0.79	0.10					
45 - 50			0.05	0.08	0.27	0.10					
50 - 55			trace	0.02	0.27	0.15					

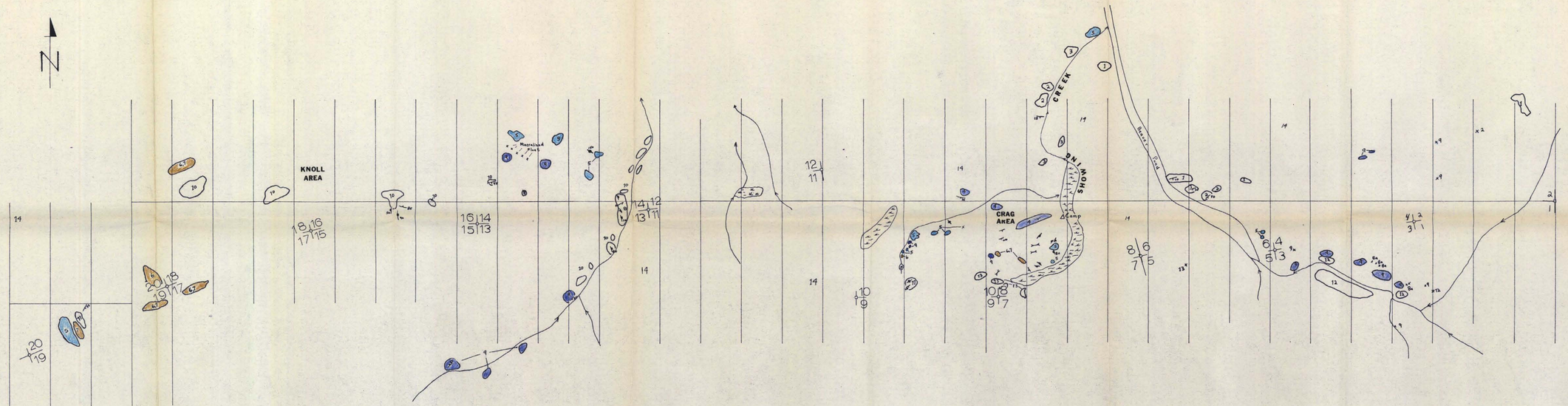
L denotes ' less than'
cc Serem - Vancouver

Registered Assayer, Province of British Columbia

SEREM LTD

BURN CLAIM GROUP

GEOLOGY



LEGEND

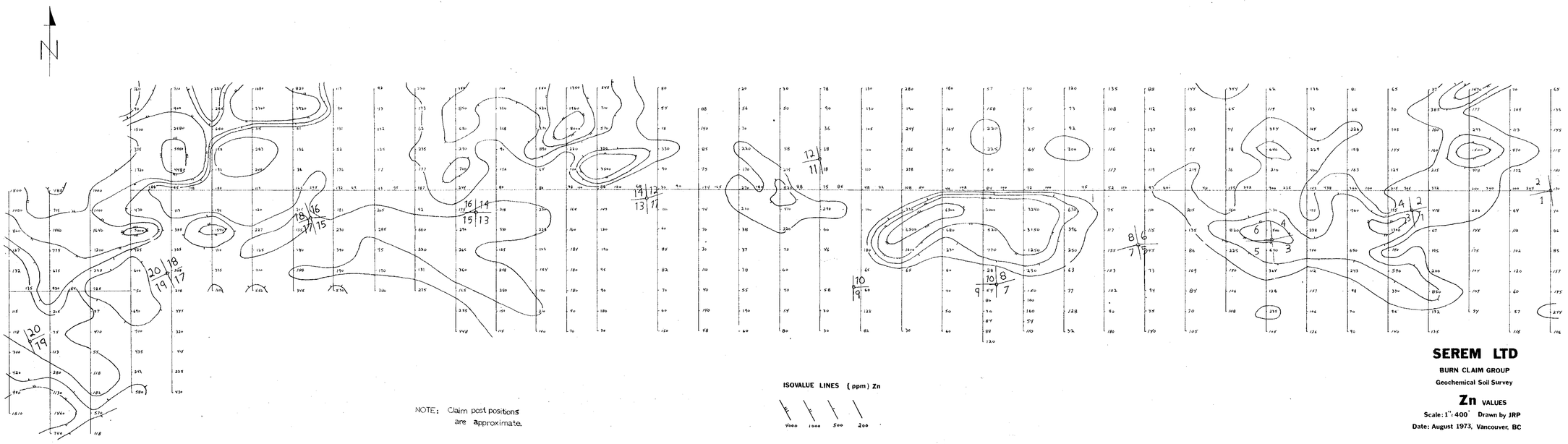
- 14 Glacial drift covered area
- 13 Black slates (siliceous)
- 12 Graphitic black slates
- 11 Black calcschist
- 10 Siliceous dolomite
- 9 Grey bedded dolomite
- 8 Brown argillite
- 6,7 Tan dolomitic zones, breccia zones
- 5 Massive white limestone
- 4 Grey bedded limestone
- 3 Green schist, chloritoschist
- 2 Quartzose schist, (with quartz veins)
- 1 Impure micaceous quartzite, (with conglomeratic lenses)

- Outcrop
- Float
- Trench
- Muskeg
- Bedding
- Joint
- Schistosity
- Ba - Barite

SCALE : 1" = 400'

Date: August, 1973 Drawn by JRP

4605-M3



NOTE: Claim post positions are approximate.

ISOVALUE LINES (ppm) Zn

1000 500 200

SEREM LTD

BURN CLAIM GROUP

Geochemical Soil Survey

Zn VALUES

Scale: 1" = 400' Drawn by JRP

Date: August 1973, Vancouver, BC

(2)

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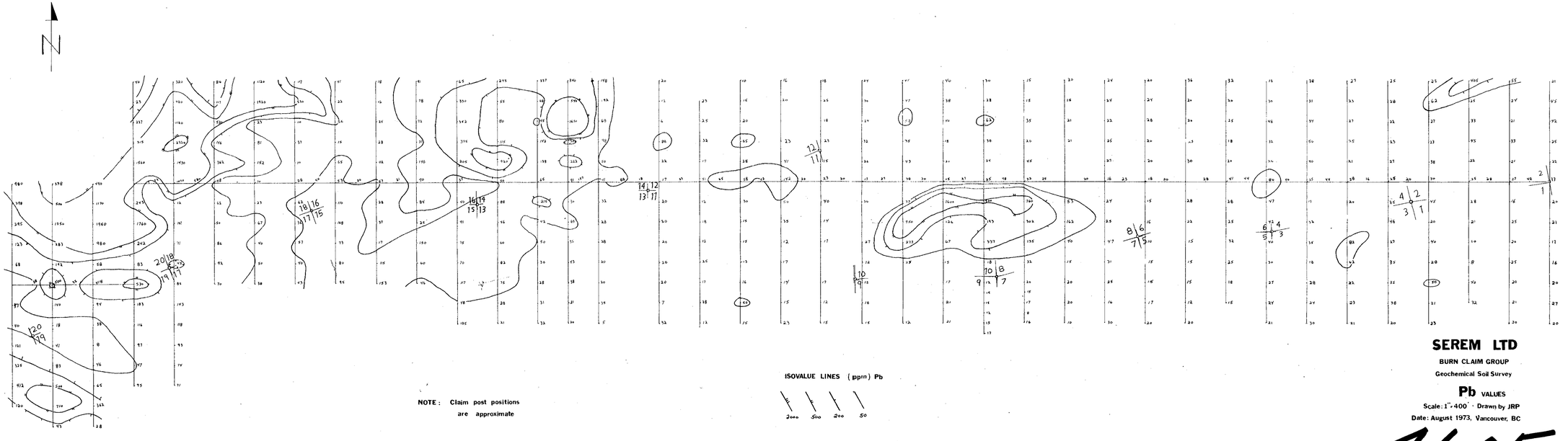

NOTE : Claim post positions are approximate

ISOVALUE LINES (ppm) Pb

2000 500 200 50

SEREM LTD

BURN CLAIM GROUP

Geochemical Soil Survey

Pb VALUES

Scale: 1"=400' · Drawn by JRP

Date: August 1973, Vancouver, BC

4605-M5